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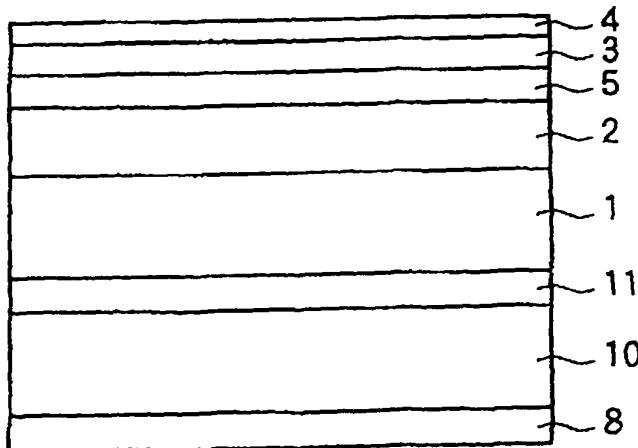
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(54) Title: HIGH REFRACTION FILM, ITS COATING COMPOSITION, AND AN ANTI-REFLECTION FILM, A POLARIZING PLATE AND AN IMAGE DISPLAY DEVICE INCLUDING SAID FILM



(57) Abstract: A high refraction film, an anti-reflection film, a protective film for polarizing plate, a polarizing plate and an image display device excellent in weathering resistance are provided. The high refraction film (3) comprises inorganic fine particles having an average particle diameter of from 1 to 200 nm comprising titanium dioxide as a main component and has a refractive index of from 1.55 to 2.40. The anti-reflection film comprises a transparent support (1) and a high refraction film formed thereon. The polarizing plate comprises a polarizing film (8) and two protective films (9, 10) having said polarizing film interposed therebetween, wherein an anti-reflection film is used as at least one of the two protective films or wherein an anti-reflection film is used as one

WO 2003/093878 A3

protective film and an optically compensated film having optical isomerism is used as another protective sheet. The image display device has a structure comprising an anti-reflection film or a polarizing plate disposed on the image display surface thereof.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP 03/05476

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 G02B1/11 G02B5/30 G02F1/13363 C09C1/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 G02B G02F C09C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 089 093 A (FUJI PHOTO FILM CO LTD) 4 April 2001 (2001-04-04) page 5, line 34 - page 6, line 55; figure 2B page 9, line 44 - page 12, line 30 page 44, line 9 - line 18; table 1 & JP 2001 166104 A 22 June 2001 (2001-06-22) cited in the application -----	1-4,6-8, 10-18, 24,27,30
A	EP 0 736 073 B (BASF CORP) 11 March 1998 (1998-03-11) page 2, line 2 - line 7 -----	1,5
A	EP 1 029 832 A (NIPPON SHEET GLASS CO LTD) 23 August 2000 (2000-08-23) page 4, line 1 - line 36 -----	5

 Further documents are listed in continuation of box C. Patent family members are listed in annex.

° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
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- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP 03/05476

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-8, 10-18, 24, 27, 30

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-8,10-18,24,27,30

High refraction film comprising inorganic particles having an average particle diameter from 1 to 200 nm comprising titanium dioxide as a main component and cobalt in an amount of 0.05 - 30% by mass of titanium.

2. claim: 9

High refraction film comprising inorganic particles having an average particle diameter from 1 to 200 nm comprising titanium dioxide as a main component wherein the particles are coated with $(R1)_m - Si (OR2)_n$.

3. claims: 19-23

Anti reflection film including a high refraction film with dispersed TiO₂ particles and a low refraction film comprising a copolymer with a repeating unit derived from a fluorine-containing vinyl monomer and having a (meth)acryloyl in its side chain.

4. claims: 25,26

Protective film including a transparent substrate and a high refraction film comprising inorganic particles having an average particle diameter from 1 to 200 nm comprising titanium dioxide as a main component, said protective film having a low contact angle with water

5. claims: 28,29

Polarizing plate including optically compensated film having optical isomerism

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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